

REMARKS

Status of the Claims

Claims 1-15, and 17-20 were presented for examination. In the Office Action, claims 1-14, and 17-20 were rejected under 35 U.S.C. § 102(b). Claim 15 was rejected under 35 U.S.C. § 103(a). Applicant hereby amends claims 1-14, and 17-20. Applicant adds new claim 21, and cancels claim 15. Support for the amended claims and newly added claim can be found in the specification (published application 20020015163) at least at paragraphs 0022-0025, 0031 and FIG. 3. Upon entry of this Response, claims 1-14, and 17-21 are presented for examination.

Rejection of Claims 1-14, and 17-20 under 35 U.S.C. § 102(b)

Claims 1-14, and 17-20 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. patent 6,011,373 to McConnell (hereafter “McConnell”). In particular, the Examiner submits that McConnell discloses all elements of Applicants previously presented base claim 1. Although Applicant has amended claim 1, Applicant provides the following remarks intended to clarify errors in the rejection of claims 1-14, and 17-20 under 35 U.S.C. § 102(b). The following remarks can be applied to the amended claim 1.

In the Office Action, the Examiner states (penultimate bullet, page 2 of the Office Action) that McConnell discloses “means for selecting … a desired trajectory.” The cited figures and related discussions do not disclose selecting a *desired trajectory*. The cited figures and related discussions are directed to selecting an *input command*. In general, selection of an input command does not guarantee a particular trajectory of a moveable element. The resulting trajectory depends upon electrical and mechanical characteristics of the system. The Examiner further states (last bullet, page 2) that McConnell discloses “circuitry … for providing a shaped input … to the electromechanical mechanism … to move the movable element … along a *desired trajectory* (e.g. level of robustness, col. 11, lines 55-65 and col. 12, lines 20-24).” (Emphasis added.) The cited sections from McConnell do not disclose moving a movable element along a desired trajectory. At col. 11, lines 55-65, McConnell discloses manipulating an “initial command input according to the methods discussed below to arrive at a command input **124** with the desired levels of robustness, noise generation potential, and response time.” Applicant submits that a command input with desired levels of robustness, noise generation

potential, and response time is not a desired trajectory of a moveable element as recited in Applicant's claim 1. For a definition of robustness, see McConnell at col. 1, lines 18-23.

Robustness pertains to how a system behaves when its natural frequency changes over time, *e.g.*, due to aging of system components. At col. 12, lines 20-24, McConnell discusses adjusting the "rankings of one or more of the characteristics used to select" an input command. Again, this does not disclose a desired trajectory of a moveable element as recited in Applicant's claim 1.

The Examiner errs in his interpretation of "desired trajectory." On page 6 of the Office Action, second paragraph, the Examiner states, "a desired trajectory is an input command for controlling and/or testing vibration of the output system." Applicant has repeatedly tried to correct the Examiner's misunderstandings and has explained in Applicant's response filed December 12, 2007, page 2, last paragraph the meaning of a desired trajectory. Applicant further adds that an input command generally is applied as input to a system and produces a system response. A desired trajectory is physical movement of a system component. A desired trajectory is not an input command as the Examiner mistakenly maintains.

The Examiner has also erred in his interpretation of McConnell at Col. 22, lines 34-42. McConnell does not disclose a "stepper motor for driving the inkjet cartridge back and forth" as examiner states on page 2 of the Office Action. Rather, McConnell discloses "a stepper motor to drive the inkjet cartridge *cover* to an open and closed position *before and after printing*." (Emphasis added.) This is considerably lower technology than the problem addressed by the Applicant: reducing vibrations and/or acoustics using input shaped trajectories of printer heads and/or paper feeding mechanisms during printing. It will be appreciated that the selection of trajectories for such printer components can be a complex process to insure that printed images are produced correctly.

Because McConnell does not teach circuitry for providing a shaped input to the electromechanical mechanism to move the movable element along a desired trajectory wherein the desired trajectory is determined using input shaping as recited in Applicant's claim 1, Applicant submits that McConnell does not properly anticipate Applicant's claim. Accordingly, Applicant requests reconsideration and withdrawal of the rejections of claims 1-14, and 17-20 under 35 U.S.C. § 102(b) to the extent they are maintained against the amended claims.

Rejection of Claim 15 under 35 U.S.C. § 103(a)

Claim 15 has been cancelled, but incorporated as an additional element of claim 1. Applicant submits that McConnell teaches a method of smoothing input commands. (Col. 14, lines 24-31.) Applicant has recognized this method as one which generally and undesirably increases system response time. “Other approaches tend to smooth trajectories in an effort to reduce vibrations or acoustics and therefore incur large time penalties.” (Published Application, paragraph 0004) Accordingly, McConnell teaches away from Applicant’s claimed invention, and one would not look to the teachings of McConnell to arrive at Applicant’s claimed invention. Applicant submits for at least this and reasons set forth above McConnell cannot be relied on to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

CONCLUSION

In view of the above, Applicant submits that all presently pending claims are in condition for allowance, and early indication thereof is respectfully requested. If the Examiner feels that a telephone call would expedite the prosecution of this case, the Examiner is invited to call the undersigned at (617) 248-5143.

Respectfully submitted,

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